REMARKS

Claims 1-127 are pending in the present application with claims 4, 5, and 10-127 having been withdrawn from further consideration. By the present communication, no claims have been added or amended and claims 10-127 have been canceled without prejudice or disclaimer. Claim 2 has been deemed allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. (Office Action, page 3). Accordingly, upon entry of the present amendment, claims 1-3 and 6-9 will be under consideration.

Objections to the Specification

Applicants respectfully traverse the objection to the specification as allegedly containing an incorrect citation in paragraph [0006]. Without acquiescing to the reasoning offered by the Office, and in order to expedite prosecution of the instant application, Applicants have amended paragraph [0006] to correct the citation. Withdrawal of the objection is respectfully requested.

Rejections under 35 U.S.C. §102

Applicants respectfully traverse the rejection of claims 1, 3, and 6-9 under 35 U.S.C. §102, as allegedly being anticipated by Bornemann, *et al.* (*Biochem. J.*, Vol. 325, pages 623-629, 1997; hereinafter, "Bornemann"). To anticipate, a single reference must inherently or expressly teach each and every element of claimed invention. *In re Spada*, 15 USPQ2d 1655 (Fed Cir. 1990); and *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP § 2131.

The Office Action alleges that Bornemann teaches methods of assaying for cysteine:glucosaminyl inositol ligase and identifying an inhibitor of this enzyme comprising determining the ligation of cysteine to the glucosaminyl inositol (GI) in the presence and absence of a candidate inhibitor. The Office Action cites to Bornemann at the abstract and introduction on page 623, text on page 625, the paragraph bridging pages 626-7, figure 4 on page 627, text and Table 1 on page 628, and text and figure 8 and page 629. Applicants respectfully submit that contrary to the assertion of the Office Action, Bornemann is absolutely silent with regard to inhibitors of cysteine:glucosaminyl inositol ligase and methods of identifying such inhibitors.

Bornemann discloses that the "results indicate that the biosynthesis of mycothiol proceeds by the sequential addition of cysteine and acetate to α-D-GI." Further, "when no acetate was added to the incubation mixture, an additional thiol accumulated. (Bornemann, abstract). As such, the absence of acetate reduced the biosynthesis of mycothiol, which is by definition, the opposite activity of an alleged inhibitor. Thus, Bornemann shows that "the pseudo-disaccharide 1-D-*myo*-inosityl-2-amino-2-deoxy-α-D-glucopyranoside (α-D-GI) is part of the biosynthetic pathway leading to mycothiol, which is formed by the sequential addition of cysteine and then acetate to α-D-GI." (Bornemann, Introduction, page 624). Applicants note that the paragraph bridging pages 626-7 discloses experimental results from investigating "the dependence of mycothiol formation on acetate concentration." (Bornemann, page 626). The results of such an investigation "suggest that the product recovered in fraction 1 is a precursor, most probably desacetylmycothiol, rather than a degradation product of mycothiol." (Bornemann, page 626). Further, Figure 4 on page 627, shows the distribution of reaction products between the fractions at elevated concentrations of the reactants. More specifically, Figure 4 shows that "the conversion of desacetylmycothiol into mycothiol was incomplete even in the presence of an excess of acetate (Figure 4B). Instead a requirement for acetyl-*S*-CoA for the formation of mycothiol became evident." (Bornemann, page 627). Table 1 provides ^{1}H NMR spectral data that "demonstrates conclusively that α-D-GI is on the biosynthetic pathway leading to mycothiol." (Bornemann, page 628). Finally, Figure 8 shows the dependence of the rate of product formation on the concentration of the two isomers of α-GI. While one isomer is clearly selected over the other, it is noteworthy to mention that both showed an increase in product formation.

Accordingly, Applicants submit that Bornemann is a mere elucidation of the biosynthesis of mycothiol. At no point does Bornemann disclose identifying an inhibitor of cysteine:glcosaminyl inositol ligase by determining the ligation of cysteine to the glucosaminyl inositol in the presence and absence of a candidate inhibitor. Thus, since Bornemann fails to disclose each and every element of the claimed invention, Applicants respectfully submits that Bornemann fails to anticipate the amended claims and request withdrawal of the rejection.

Conclusion

In view of the amendments and above remarks, it is submitted that the claims are in condition for allowance, and a notice to that effect is respectfully requested. The Examiner is invited to contact Applicant's undersigned representative if there are any questions relating to this application.

No fee is believed to be due in connection with the filing of this paper. However, the Commissioner is hereby authorized to charge any fees that may be required by this paper, or credit any overpayment to Deposit Account 07-1896 referencing the above-identified attorney docket number.

Respectfully submitted,

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